

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number  
**WO 2005/008969 A1**

(51) International Patent Classification<sup>7</sup>: **H04L 12/28,**  
**H04Q 7/32**

(21) International Application Number:  
**PCT/US2004/022474**

(22) International Filing Date: **14 July 2004 (14.07.2004)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
**60/487,019 14 July 2003 (14.07.2003) US**

(71) Applicant (for all designated States except US): **MAT-**  
**SUSHITA ELECTRIC INDUSTRIAL CO., LTD.**  
[JP/JP]; Matsushita IMP Building, 19th Floor, 1-3-7  
Shiromi Chuo-ku, Osaka 540-6319 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NARAYANAN,**

**Sathya, R. [IN/US]; 4604 Hunters Glen Drive, Plainsboro,**  
**NJ 08536 (US). KHANDLWAL, Rajesh, B. [US/US];**  
**1031 Buxton Road, Bridgewater, NJ 08807 (US).**

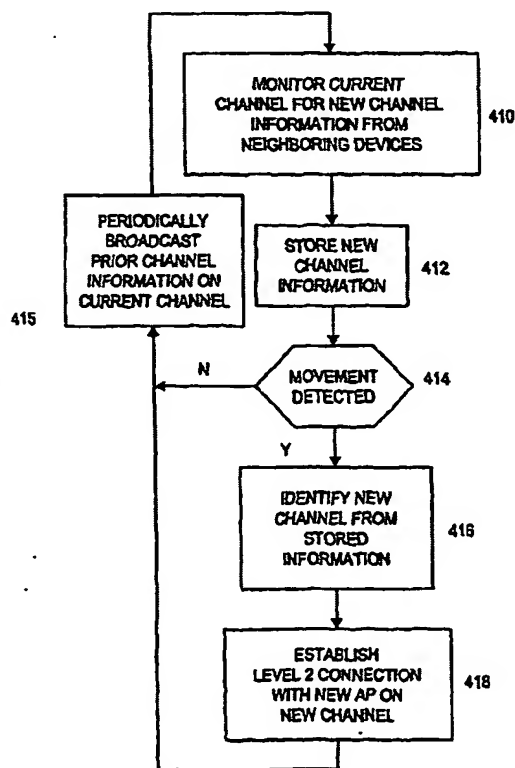
(74) Agent: **NIGON, Kenneth, N.; RatnerPrestia, P.O. Box**  
**980, Valley Forge, PA 19482 (US).**

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: **METHOD FOR REDUCING HAND-OFF LATENCY IN MOBILE NETWORKS**



(57) Abstract: A method for use in a mobile device to expedite hand-off of mobile devices between access points first detects movement of the mobile device among the coverage ranges of the access points. A mobile device that moves from one access point to another periodically transmits information on the data link level connection of its new access point on the channel used to access its prior access point. A first mobile device that is coupled to access points in a particular area maintains network level access information for access points with which it has communicated. When a new mobile device enters the area, the first device detects the new device and transmits the list to the new mobile device, enabling the new device to connect to an access point without transmitting a router solicitation message or receiving a router advertisement message.

WO 2005/008969 A1